

STUDY SUMMARY - POOL OPERATOR EXAM

This study summary is intended to assist those who are preparing to take the Pool Operator licensing test. Pertinent regulations are restated in shortened, easy-to-read form. Please see the "*Loudoun County Pool Regulations*" for detailed information. Copies are available at the Health Department.

Scope

These regulations apply to public pools and spas in Loudoun County.

Permits

A pool must have an operating permit, issued by the Loudoun County Health Department each year, before it may be opened.

Inspections

The Health Department will come to a pool at any reasonable time for the purpose of conducting an inspection.

A pool and its related facilities must be maintained in a safe, clean, and orderly manner.

Turnover

"Turnover" means the time required to circulate through the filter system a quantity of water equal to the pool or spa volume. The recirculation system shall be designed for a turnover time of pool water according to the following table:

Type of Pool	Turnover Time (hrs.)
Diving	8
Swimming	6
Training	4
Wading	2
Combination diving and swimming	6
Spa	4
Therapeutic and wood hot tubs	1/4

Pool Operators:

A person may not act as or perform the duties of a pool operator without a Pool Operator License issued by the Health Department. To get a license, you must be at least 16 years old, apply in person at the Health Department pass the pool operator licensing test, present a photo ID and pay a fee of \$10. A licensed pool operator shall be on site at all times when a pool or spa is open.

Dressing & Rest Rooms:

Every pool must have toilets, sinks, and showers available. These must be properly maintained and in working order. Supplies such as soap, toilet paper, and paper towels must be present at all times.

The part of the structure containing the showers, water closets, urinals and lavatories shall be designed so that these facilities are in a line of travel used by the patrons prior to entering the pool area and shall be provided with an entrance and a separate exit opening directly to the pool deck. However, such exit shall not be near the deep portion of the pool.

Floors for all dressing rooms, showers, toilets and lavatories shall have a minimum pitch of one to fifty (one quarter inch per foot) to the drains with no low spots that will allow water to stand.

Separate dressing rooms shall be provided for both sexes. Metal lockers, wire baskets, hooks or other sanitary means of storage of clothing and personal accessories shall be provided. All storage containers for clothing shall be kept clean and sanitary.

Showers shall be provided in the proportion of one for each forty persons at the time of maximum load. Each shower shall supply an adequate quantity of heated water through a device that will prevent scalding. Water from each shower shall drain.

Food Service

Food preparation or service facilities may be permitted within the pool area or enclosure, provided that these facilities are separated from the pool by a fence or suitable barrier at least one meter (three feet) high. No refreshments or food shall be consumed in the deck area or served in glass or metal containers.

Safety and Rescue Equipment:

Every public pool shall be equipped with the following aids to safety and rescue which shall be readily accessible at all times:

- One or more light but strong poles;
- One or more throwing ring buoys;
- A first aid kit which shall be kept filled and readily accessible for emergency use;
- A readily accessible room or area designated and equipped for emergency care;
- A telephone for emergency calls;
- Backboard with head immobilizer;
- Stretcher or cot;
- Two blankets for emergency use only;

Lifeguards:

Pool lifeguards shall be properly trained and qualified lifesavers and shall be certified by a competent lifeguard training organization. At least one lifeguard shall be on duty for each seventy-five persons or fraction thereof in the pool enclosures at any one time.

CPR & First Aid Personnel:

There must be a person at the pool who has a current and valid CPR certificate and a current and valid First Aid certificate.

Disinfection:

All pools must maintain proper water quality, i.e., free chlorine residual between 1.0 and 3.0 ppm or a free bromine residual between 2.0 and 4.0 ppm. If cyanuric acid or chlorinated cyanurate is used, a free chlorine residual of 1.0 ppm must be maintained for a cyanuric acid residual of 25 ppm, and 1.5 ppm free chlorine for a cyanuric acid residual of 50 ppm. If the chlorine residual falls below 1.0 ppm, swimmers must vacate the water until a satisfactory residual is restored.

All spas must maintain a free chlorine/ bromine residual between 2.0 ppm and 10.0 ppm.

Optimum Water Chemistry:

- pH shall be maintained between 7.2 and 7.8.
- Total Alkalinity shall be maintained between 60 and 180 ppm.
- Calcium Hardness shall be maintained between 150 and 400 ppm.
- The water shall be balanced according to the Langelier Saturation Index.

The water shall be clear enough so that the main drain is clearly visible and sharply defined when observed from the side of the pool or spa.

Water additives and treatment chemicals shall be used according to the manufacturers' instructions.

Operating Records:

Pool record shall be maintained up to date and shall be available for inspection at all times while the pool is in use. Free chlorine residual and pH test results shall be recorded at least once every two hours while the pool is in operation. Alkalinity tests shall be made and recorded at least weekly.

Placards:

The water test results shall be legibly and conspicuously posted on a permanent, waterproof, and durable placard in a location where it is readily observable by the patrons. The most recent required daily water quality test results, including the time of day tested shall be posted. Water temperature shall also be posted for heated pools.

A permanent, legible, placard specifying facility rules and regulations regarding personal health and safety shall be posted in plain view of patrons on deck, at the entrance to the pool and in locker rooms.

A permanent, legible and waterproof specification placard shall be conspicuously displayed within the filter room and shall be adequately lighted. The following information shall be included on the placard:

- Name and address of the facility;
- Volume in gallons;
- Water surface area in square feet;
- Minimum turnover time in hours;
- Minimum rate of flow in gallons per minute to provide the required turnover time;
- Bather load.

Water Treatment & Test Equipment:

An approved water quality test kit for determining free and total chlorine or total bromine residuals, pH, total alkalinity, and calcium hardness shall be provided and maintained. Provisions shall be made for checking superchlorination levels. Diethyl-p-phenylene diamine (DPD), or other testing reagent, is required for determining free halogen residual. If another disinfectant has been approved by the Health Department for use at a swimming pool, an appropriate test kit shall be provided and maintained. A test kit for measuring the concentration of cyanuric acid, accurate within five (5) ppm, shall be provided at each swimming pool using cyanuric acid or chlorinated cyanurates. Testing equipment for total dissolved solids shall also be provided.

Hand-feeding of chemicals shall not be permitted during hours of operation or within thirty (30) minutes prior to opening.

Disease Control:

Any person having a skin disease, nasal or ear discharge, inflamed eye or any communicable disease shall be excluded from public pools.

Water Contamination:

If a pool is contaminated by human or animal feces it must be closed immediately, and the Health Department notified. The pool operator must take the following action:

- Close the pool for at least one turnover time;
- Capture fecal material in a container for disposal;
- Raise the chlorine residual to 2.0 ppm;
- Overflow the pool; and;
- Backwash the filter after one hour.

Injury and Illness Reports:

The owner shall immediately notify the Health Department of all drowning, near drownings, injuries, water related illness or deaths which have occurred. Notification of minor injuries, such as minor abrasions or superficial cuts, shall not be required. Owners shall submit a complete written drowning and injury report, containing all relevant facts and information related to the incident, to the Health Department within seven (7) days of an incident.